University of Washington

ARBORETUM BULLETIN

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Winter 1984, Vol. 47, No. 4

Concerning This Issue . . .

Take a stroll down "memory boulevard" in this issue of the *Arboretum Bulletin*. Mr. A.K. Free recounts some of his childhood memories of Washington Park before it was an arboretum; Mr. Arthur Lee Jacobson has written an informative article on the history of Seattle's parks; Kathy Mendelson reports on efforts to rejuvenate the Medicinal Herb Garden; and Leslie Norton gives us some insight into the beautiful old linden at Molbak's Nursery.

Beginning next issue the *Aboretum Bulletin* will feature a classified advertisement section. All those wishing to buy or sell plants, horticultural services and books, or to advertise a plant society, etc., may do so for 50¢ a word (25 word minimum). Please contact Nancy Pascoe at 325-4510/284-4650, or inquire at the Aboretum Foundation, c/o University of Washington -XD 10, Seattle, WA 98195.

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Correction: In the Fall 1984 issue (Vol. 47, No. 3) the 4th Vice-President position should have read "Richard Doss."

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COVER
A stretch of Lake Washington Boulevard
as it appeared about 75 years ago.

Remembrances of Washington Park

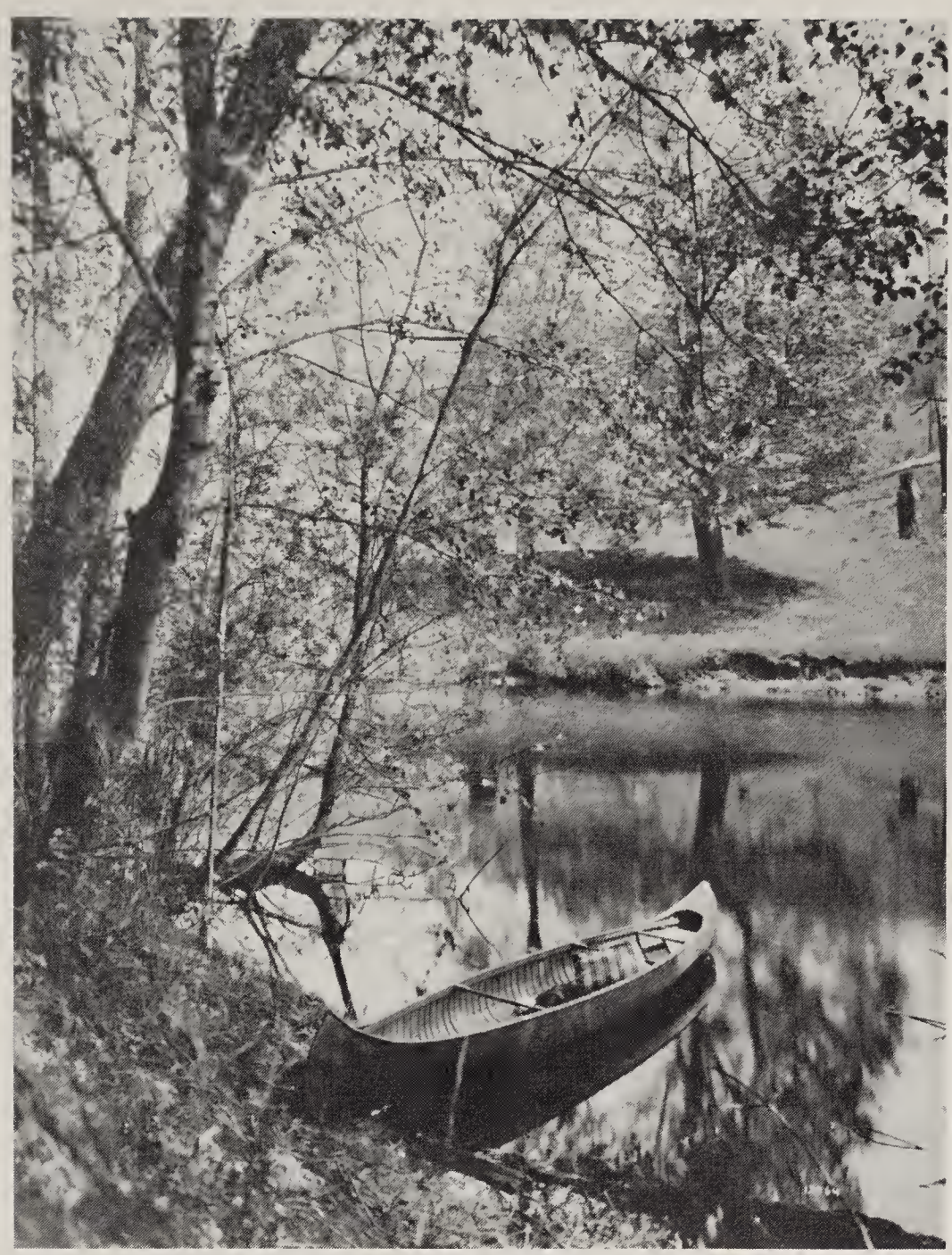
A.K. FREE

I was chatting with Brian Mulligan recently and I told him that I can recall what Washington Park was like before the Arboretum was conceived, before Broadmoor was developed and before the Montlake Cut was made and Lake Washington consequently lowered. He said, "Why don't you write it down?" So I have and this is how I remember it in about the year 1913.

Azalea Way

Back in those times there were equisetums and equestrians in the Park. Many of the city parks have always had provisions for individual sports such as golf, tennis, swimming, lawn bowling, kite flying, etc., so it is easy to assume that Washington Park was dedicated to the saddle set. At this period, in the early days of the auto, riding was a very popular and fashionable sport for the affluent. Stables were located just north of Madison Street, on the valley floor, on the west side of the creek. It was probably a concession where they had horses for rent and they may have stabled and serviced riding horses for people who lived in the vicinity.

In those days one couldn't take a horse and go galloping up the street or boulevard. It wouldn't have been safe for the rider, the horse, the pedestrians, nor for the horse's hooves. There may have even been an ordinance against riding at more than a fast trot. What is now called Azalea Way was built as a fast track for riders and was called "The Speedway." It was for horses only and had no restrictions as to speed. Here riders could let their horses run all out, unleash their imaginations and ride "hell for leather," then turn around and gallop back again. The only apparent difference between then and now is that it has been cut off on both ends and that it is in lawn. In its days as "The Speedway" the surface was graded dirt with tanbark in the



Canoeing was popular on Lake Washington.

Historical Photography Collection,
University of Washington Libraries.

soft places. It extended much as it does now, from the stables on Madison Street to a set of gate pillars built of stone. These pillars are still located just behind the present Arboretum office building, by the Broadmoor north gate. This is a distance in excess of one mile.

Madison Park Playfield

The ravine where Madison Street crossed the park creek was quite deep. The street was supported on a high timber trestle which carried two cable car tracks in the center and had a roadway on either side. From the creek level one could look up and see the running cables supported on sheaves below the cable slots in the planking. The cable cars at that time ran all the way from Western Avenue to Madison Park. This was the shortest route to Snoqualmie Pass via the Madison Park-Kirkland ferry, thence over the hill to Redmond.

The trestle was replaced with a land fill, a "sanitary fill" they called it, which is a nice way of saying garbage. However, garbage in those days was not the same as it is now; about three-fourths of it was coal ash. Coal was used almost universally for heating homes and for cooking, so there was plenty of ash. One couldn't buy cat or dog food at the grocery store, so there wasn't so much organic waste, just enough to make it smell unpleasant.

During the project in which the trestle was being replaced by land fill the level of

the creek bottom was raised until there was sufficient space for a playfield and parking lot. This is Madison Park Playfield.

Foster's Island

On Lake Washington canoeing was popular. A young man couldn't hope to have a car in those days. But with a nice shiny canoe, complete with a carpet, lazyback and cushions, he wouldn't want for dates. Before the Lake was lowered to the same level as Lake Union, Foster's Island was a well-defined islet with deep water all around. There was no access to the island except by boat. The east shore was rocky but the west side had a nice beach and a grassy foreshore; it was a good place to beach a canoe and have a picnic on a summer's day. This west side of Foster's Island had the dubious reputation of being an aquatic "Lover's Lane."

On a summer's day my uncle would call up and say to me, "Come over this afternoon and we will go fishing." So I would say, "Sure," then hop on my bicycle, roll along N.E. 45th Street to the University District, then down through the campus and across the Montlake isthmus, which was downhill all the way, then up through Washington Park via Washington Boulevard to Madison Street. My uncle lived not far from where the Boulevard crosses Madison Street.

My uncle's favorite fishing place was on the east side of Foster's Island; the shortest and easiest route from his home was to walk down "The Speedway," which would have few riders at this time of the day.

In the cove formed by the east side of Foster's Island and the mainland an old man had a ramshackle boathouse moored to some piles and rickety floats. He had a few skiffs which he rented to fishermen. My uncle moored his skiff and kept his oars there.

Well, the first order of business was to get some bait. So my uncle and I would embark in the skiff to the shore of Foster's Island where we would allow the craft to gently float up broadside to the beach. Then we would lean over the side and pick up some of the larger submerged stones. These would have two or three caddis-fly larvae clinging to them. These are bottom-crawling, three-fourths-inch-long critters that have encased themselves in jackets of minute sticks and stones. My uncle and I would break away the case; the nude crawler inside was excellent fishing bait.

The fishing was always good for yellow perch and just at sundown a catfish or two might bite. And so home in the gloaming, back up "The Speedway," to spend the night with my aunt and uncle. Those were the days of real sport.

The Medicinal Herb Garden

KATHY MENDELSON

A new organization, the Friends of the Medicinal Herb Garden, was formed last summer to restore and maintain the 2½ acre medicinal garden on the University of Washington campus.

At one time, gardens like the Medicinal Herb Garden were attached to nearly every college of pharmacy in the country. The gardens were living laboratories for faculty and students studying the medicinal properties of plants. Now, only three university-sponsored medicinal gardens survive. The University of Washington's Medicinal Herb Garden, which was started in 1911, is the oldest and largest collection of its kind on the west coast.

In 1979, the University faced a severe budget crisis and was forced to cut all funding for the garden. With no budget and no staff, the garden has survived on bare-bones maintenance and occasional volunteer help. Although the plant collection has suffered, the garden continues to attract support. The Friends of the Medicinal Herb Garden is a group of University faculty, staff, students, civic leaders, horticulturists and others, whose goal is to restore the garden.

For further information contact:
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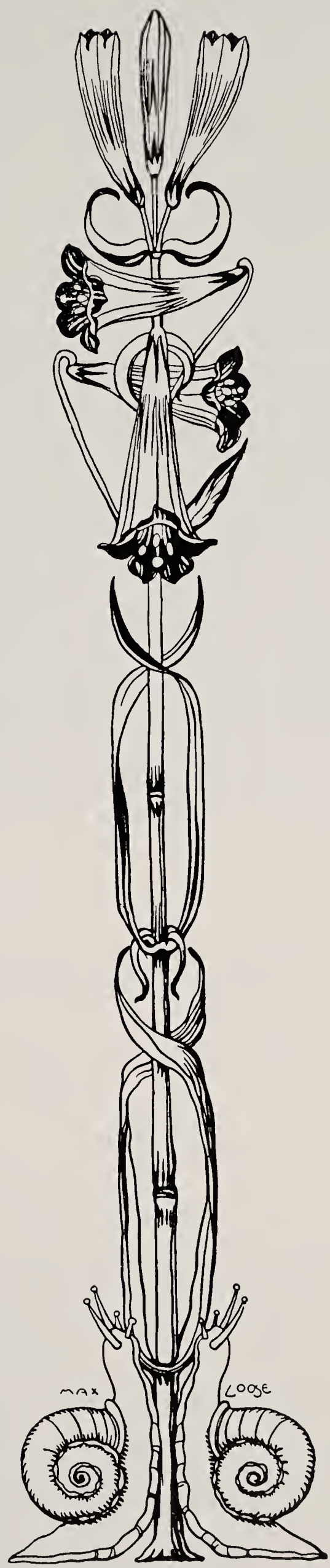

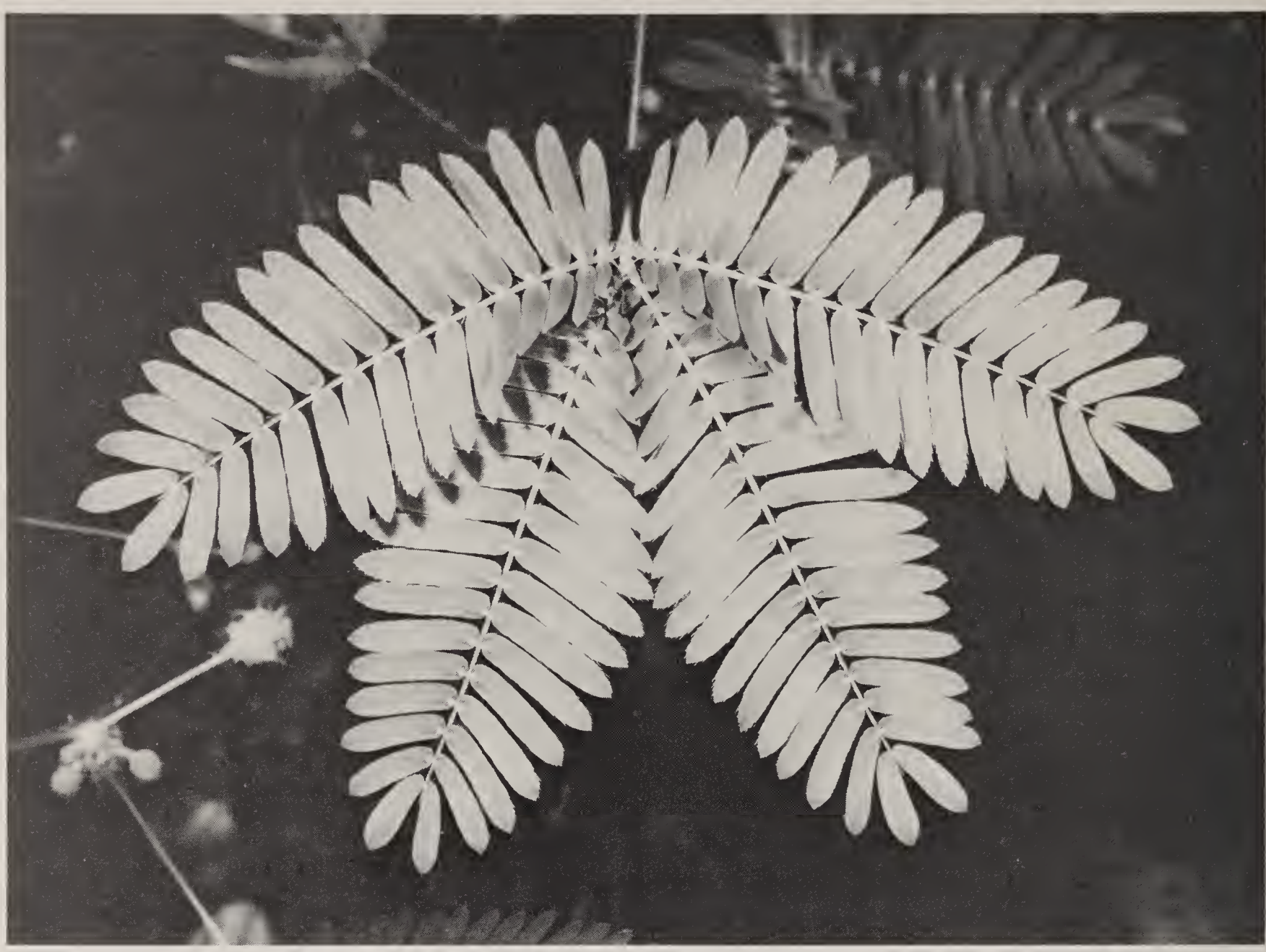

An "awake" sensitive plant. *photo: Tom Boyden*

The Sleeping Movements of Plants

B.J.D. MEEUSE

From time immemorial, the daily sleeping movements performed by certain plants (particularly of the legume family) have appealed to the imagination of various observers. Sleeping movements involve a dropping or folding of the leaves at night, and a subsequent reopening next morning. The leaves of the sensitive plant (*Mimosa pudica*) will display such a "sleeping" reaction—and very quickly!—when touched, shaken, or exposed to extreme local heat. As early as 1935, the Dutch plant physiologist A.L. Houwink (who, later on, was to gain laurels as a pioneer electron microscopist and organizer of a large biological library) sug-

gested that in the sensitive plant the stimulus is transmitted from the place where it is administered (perceived) to the plant part that reacts (the swollen "joint" or pulvinus at the base of the leaf-stalk) by a special chemical compound—a messenger or hormone—which travels in the plant's "sap." At least for the sleeping movements, this idea has now been confirmed by the German scientist H. Schildknecht. The transmitter substance is a member of a group of closely related hormones for which the name *turgorins* (or turgorines) has been coined. Arriving at their target, they will depolarize certain cell membranes, causing a change in their water-permeability; the inevitable result is water loss and thus deflation of the cells, technically known as "a drop in turgor." The turgorine that is the most widespread in nature is the so-called K-PLMF-1 (in which PLMF stands for periodic leaf movement factor). A rich and convenient source of K-PLMF-1 is the karroo tree, *Acacia karroo*, native to South Africa. With the aid of the most modern and sophisticated techniques, Schildknecht has been able to determine the chemical structure of this turgorine (it is a sulfur-containing derivative of gallic acid). So far, K-PLMF has been found in extracts of *Mimosa pudica, Acacia karroo, A. dealbata, Albizia julibrissin* (silk tree), *Gleditsia triacanthos, Robinia pseudoacacia* (locust tree), *Oxalis stricta* and *O. deppei* (but not *O. acetosella*!) and *Abutilon grandiflorum*. The time needed to cause reaction is 25 to 60 seconds. K-PLMF-1 works in concentrations as low as 0.0001 gram per liter. Not surprisingly, the turgorines have an antagonistic effect on turgor-caused movements such as those of the stomata of leaves which, as is well-known, "blow themselves open" in the light. Thus, when turgorine causes a leaf to drop, the stomata will also close.

A "sleeping" sensitive plant.

photo: Tom Boyden

It is clear that the discovery, purification and chemical characterization of the turgorines open up a new and fascinating field of investigation.

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The Molbak linden in winter. *photo: Judith Allison Walters*

The Molbak Linden

LESLIE NORTON

"It is really first in maturity that life is most beautiful -- when it has run its journey and speaks its story complete."

Thus wrote the landscape artist Jens Jensen to a client about the changes that would take place as the plants in his garden reached full development.

The magnificent European linden, at Molbak's Greenhouse & Nursery in Woodinville, exemplifies Jensen's idea. Believed to be about 105 years old, this fine old tree shows us what a linden is like. When the rich tapestry of thick summer foliage begins to thin in October, and the limbs and twigs are gradually left bare, we are able to appreciate the unique branching pattern of this specific linden *(Tilia cordata)*.

One picnic table stands beneath the tree's low-reaching branches, but there would be ample room for a dozen. I stepped off 26 paces from drip line to drip line across the shady domed room. The massive trunk in its center measures some 12 feet around. To stand close to such a tree is to be greatly moved by its strength and seeming permanence. One senses, too, the extensive and powerful root system that must be necessary to sustain and secure such a giant.

To see this tree in its maturity is to want to express appreciation to the unknown person who planted this non-native so long ago, to the succession of owners of the land on which it has grown, and to Mr. and Mrs. Egon Molbak who are its present protectors.

I believe that in people, as in trees, it is only when time and its experiences have refined a life, that its quality is revealed. In children, there is a promise and a mystery, but it is only in maturity that the mystery is revealed, the story is complete, and each person's unique nature becomes plain and irrevocable.

Winter Damage
The Carl S. English Gardens

MIKE FLEMING

The plant collection at the Carl S. English Gardens is quite tender since much of the plant collection is native to the temperate world. However, since we reduced our irrigation frequency in early August and the winter cold came on rather gradually, the plants appeared to have developed adequate cold tolerance. Although temperatures fell below 17° F for several days, the damage sustained was not severe. We are quite pleased that we fared as well as we did.

The following is a winter plant damage list for 1983/1984:

Agave americana - century plant	50% leaf burn - died
Berberis darwinii - Darwin barberry	20% leaf burn
Callistemon linearis - narrow-leafed bottlebrush	100% leaf burn - coming back
Camellia 'J.C. Williams'	20% leaf burn
Camellia reticulata	10% leaf burn
Camellia sasanqua	10-50% leaf burn
Ceanothus 'Millerton's White'	10% leaf burn
Ceanothus prostratus - squaw carpet, mahala mat	20% leaf burn
Ceanothus thyrsiflorus - blue blossom	80% leaf burn - dead wood
Chamaerops humilis - Mediterranean fan palm	90% leaf burn (Possible dead wood)
Choisya ternata - Mexican orange	10% leaf burn / leaves collapsed around stem
Cistus hybridus - white rockrose	100% leaf burn - died
Cornus capitata - evergreen dogwood	100% leaf burn
Cotoneaster lacteus	30% leaf burn
Crinodendron patagua - Lily-of-the-valley tree	100% leaf burn - 50% dead wood

Cryptomeria japonica - Japanese cryptomeria	10% leaf burn
Cytisus battandieri - Atlas broom	40% leaf burn
Dendromecon rigida var. *harfordii* - bush poppy	100% leaf burn - dead wood - coming back from base
Epimedium grandiflorum - bishop's hat, long-spur epimedium	80% leaf burn
Escallonia x 'Donard Brilliance'	50% leaf burn
Eucalyptus sp.	100% leaf burn - dead wood - 10% recovery
Fatshedera lizei	50% leaf burn
Fatsia japonica - Japanese aralia	30% leaf burn
Garrya elliptica - coast silktassel	20% leaf burn
Gaultheria shallon - salal	20% leaf burn
Hypericum androsaemum - St. John's wort	100% leaf burn
Hypericum patulum	100% leaf burn
Iris douglasiana	100% leaf burn
Jasminum humile - Italian jasmine	100% leaf burn
Leptospermum scoparium prostratum - New Zealand tea tree, manuka	100% leaf burn - died
Mahonia aquifolium - Oregon grape	50% leaf burn
Nandina domestica - heavenly bamboo, sacred bamboo	40% leaf burn
Nothofagus dombeyi	10% leaf burn
Olearia haastii - daisy bush	20% leaf burn
Petteria ramentacea	80% leaf burn
Pinus patula - Jelecote pine	80% leaf burn on one with some damage to all three at the top
Pittosporum tobira	Leaves collapsed around stem - died
Podocarpus nivalis	80% leaf burn
Pyracantha crenatoserrata	80% leaf burn
Quercus agrifolia - coast live oak	100% leaf burn/ dropped all leaves - came back
Quercus glauca	20% leaf burn
Quercus myrsinifolia	20% leaf burn
Quercus rugosa	20% leaf burn
Quercus suber - Cork oak	20% leaf burn
Rhododendron 'Blue Tit'	40% leaf burn
Rhododendron 'Cynthia'	40% leaf burn
Rhododendron erubescens	20% leaf burn
Rhododendron williamsianum	slight leaf burn
Rubus hispidus	50% leaf burn
Trachycarpus fortunei - windmill palm	20% leaf burn
Trochodendron aralioides	20% leaf burn
Viburnum cinnamomifolium	20% leaf burn
Viburnum davidii	30% leaf burn
Viburnum plicatum tomentosum - doublefile viburnum	Tip die back - died

The Olmsteds and Seattle's Park System
A Brief Perspective

ARTHUR LEE JACOBSON

Much attention has been given to the Olmsted Brothers lately. For example, a national convention of Olmsted enthusiasts was held in Seattle last fall, in conjunction with the official celebration of the city's park system centennial. For those who don't know much about either the Olmsteds, or Seattle park history, this article may serve as a base.

The history of Seattle's parks can be delineated into four stages, each with its own distinctive traits. Many would claim that this is over-simplified:

1. Beginnings and pre-Olmsted years (1884-1904)
2. Olmsted years (1904 until the mid-Depression)
3. Depression and Work Projects Administration years
4. Post-Depression and modern years

Beginnings

In the beginning Seattle's parks were nearly all privately owned, and were often tied in with the real estate business. Wealthy realtors would build cable car lines with attractive pleasure grounds (parks) at the end of the line. They did this in order to sell adjacent home-lots to visitors of the rapidly growing city. This was big business indeed. Such activity flourished especially in the area stretching from Madison Park to Leschi. A number of such parks, as well as other ones not at all associated with the pecuniary motives of realtors, then began to be either generously donated, or sold to the city. Kinnear Park was among the first, becoming city-owned in 1889 at a cost of one dollar.

Thus, even before the Olmsted work began a solid and diverse "system" of parks had been established, including:

Broadway reservoir	Pioneer Square
Denny	Ravenna
Denny-Blaine	Rodgers
Howell	Salmon Bay
Kinnear	Viretta
Leschi	Volunteer
Madison	Washington
Observatory	Woodland

Some of these parks were still privately owned, but all were open to the public; some also had other names and have since

Kinnear Park.

Historical Photography Collection, University of Washington Libraries.

been renamed. The Olmsteds did not single-handedly create our park system; they added to it and enhanced it.

In attempting to discover and accurately relate the early history of Seattle's parks we find that although extant records and documentation are not scarce, they are incomplete and scattered. Currently, the greater part of the historical and contemporary data relating to our parks is filed in the Municipal Library. Each park has its own file which is available for inspection upon request. This information was organized by the late Don Sherwood, dedicated and consummate parks historian.

A typical park file contains that park's history, maps, newspaper clippings, pictures, drawings, plans, inventories, letters, and photocopies of relevant passages from official Park Department documents. Some of the files are so bulging with information that hours are necessary for a complete perusal.

The annual reports issued by the Board of Park Commissioners, beginning in 1884, provide another source of early park knowledge. For example, the 1893 edition is heavily devoted to the first of our parks' nurseries—Volunteer Park, at that time called City Park. A complete inventory of the nursery stock is printed in the report, far too long for inclusion in this article. The quantities and dollar value of each kind of plant are supplied. The names used are often archaic nurserymen's terms, thus reference to a comprehensive botanical manual, such as Rehder's, is the only way to be even approximately sure about each plant's true identity. Here is a list of the top ten trees, with their modern names; an asterisk indicates a native species:

Madrona, *Arbutus menziesii**	12,000	$240.00
European larch, *Larix decidua*	4,950	198.00
Bigleaf maple, *Acer macrophyllum**	3,670	73.40
Digger pine, *Pinus sabiniana*	3,190	63.80

A Sunday drive along Lake Washington Boulevard.

Oregon ash, *Fraxinus latifolia**	2,224	44.48
Spanish chestnut, *Castanea sativa*	1,214	97.12
Honey locust, *Gleditsia triacanthos*	1,084	54.20
Sycamore maple, *Acer pseudoplatanus*	1,017	30.50
Red alder, *Alnus rubra**	1,100	22.00
Little-leaf linden, *Tilia cordata*	998	49.90

These ten kinds of trees, although supplying close to 20,000 individual plants, amounted to less than one-third of the total tree population in the nursery. Well over two hundred kinds of trees were present. Nor were shrubs lacking—there were 25 kinds of spiraeas, 17 privets, 16 mock oranges, 14 lilacs, etc.

Why did the fledgling nursery boast such an enormous, impressive and unusually varied stock since at the time there were so few city-owned parks in which to use the plants? It was due largely to the indefatigable seed exchanges and boundless energy displayed by Edward O. Schwagerl, then the Park Department Superintendent, Landscape Architect and Engineer. He boldly instigated seed exchanges with such renowned institutions as the Arnold Arboretum in Massachusetts, Kew Gardens in England, the Smithsonian Institute and National Botanic Garden in Washington, D.C., the French Commission of Horticulture under M.L. de Vilmorin, and several park departments in the Eastern United States. He offered to trade our native Northwest seeds for anything exotic. Due to his early efforts, our parks were planted with all manner of choice plants. Schwagerl also drew up a master plan for the park system that foreshadowed features which were adopted by the Olmsteds.

Olmsted Years

The Olmsted Brothers were, at the turn of the century, a nationally recognized and prestigious landscape architectural firm which operated out of Brookline, Massachusetts. Frederick Law Olmsted, the founder of the firm, had won acclaim for his design, with Calvert Vaux, of New York City's Central Park. Seattle hired the firm to develop a master plan proposal for the park system. John Charles Olmsted, Frederick Law Olmsted, Jr., and James Frederick Dawson were the three principal individuals involved during the course of the Seattle park work. The master plan was completed in 1903, which ensured that the various scattered parks would be related harmoniously to one another, rather than being isolated and unconnected units. Hence the farsighted boulevard/connection theme (pre-conceived by Schwagerl) was polished to a brilliant finesse by these artists. The firm was then asked, in 1904, to design the boulevard through Washington Park—the first of many jobs they did for Seattle over the years.

The basic principles the Olmsteds tended to follow included: 1.) giving each park an individual treatment and identity suited particularly to its existing natural state and its intended uses; 2.) harmonizing introduced plantings and structures with the existing native plant growth and topography, so as to create a beautiful, subtle blend; 3.) framing naturalistic curving paths and boulevards attuned to human traffic, and the use of wooden structures (ornate concrete work was used where necessary); and 4.) using virtually any plant they judged worthwhile, whether or not it was native, exotic, weedy or readily available.

Relatively few of their planting-lists are extant and/or easily accessible. Green Lake, a remarkably well-documented park in this respect, offers a revealing look at the kinds of plants proposed. The plants on the February 1912 list, and the *actual* plants currently growing at Green Lake are quite different. Changes over the years have been so all-encompassing that one could use the Green Lake planting list at the Seattle Center with about equal accuracy. It would be difficult indeed to overestimate the many changes that have taken place between what the Olmsteds originally planned and what we see today, especially with regard to the plants. For even the immediate implementation of the Olmsted plans was fraught with unavoidable substitutions—what the Olmsteds proposed was often different than what actually got ordered, let alone what was received intact and properly installed.

Volunteer Park in 1913.

Historical Photography Collection, University of Washington Libraries. photo: Asahel Curtis

Instead of moaning and groaning over the substitutions, we should focus on the lasting achievements of these Olmsted designs. The Olmsteds defined the essential grid and style of Seattle's pre-Depression park system, employing their ample talents to make truly beautiful landscapes with practical designs. Their distinctive touch is reflected here not only in our parks, but also in considerable non-municipal work that they engaged in during their repeated short trips to Seattle. Some of these private schools, gardens and estates are far better examples of untampered Olmsted design than any of our ever-evolving parks.

Depression and Work Projects Administration Years

The Great Depression of the thirties sadly put an end to the Olmsteds' work on Seattle's parks, with one exception. In March, 1935, the Seattle Garden Club raised $3,000 to hire the firm to do the Arboretum master plan. Thus Washington Park had come full circle with the Olmsteds, it being their first and last Seattle park site.

The atmosphere and character of a typical Seattle park, as we experience it today, is largely the fruit of the Depression—more specifically of the W.P.A. work done in the parks. It was like a face lift over the Olmsted work. There was scarcely any piece of park or public property that did not benefit from federal dollars. It was these years that brought the vast system of quaint brick restrooms, tennis courts, drinking fountains, retaining walls, viaducts, path-clearing and the construction of Aurora Avenue through Woodland Park. The landscaping of all of these projects also took place at this time. Wholesale plantings of conifers and flowering shrubs were carried out, with the plants largely

obtained from the Washington Park nursery. The majority of the non-native conifers seen in the parks today were planted on a scale of dozens and hundreds. Such kinds as Norway spruce (*Picea abies*), Scots pine (*Pinus sylvestris*), Veitch and momi firs (*Abies veitchii* and *Abies firma*), incense cedar (*Calocedrus decurrens*), blue spruces, redwoods and Sawara cypress (*Chamaecyparis pisifera*) were extensively used. Poplars and cherry trees were also widely planted. It was as if there was a mandate to plant trees—more realistically it was probably an effort to relieve an enormous nursery surplus and to employ workers desperate for jobs. It was a much greater undertaking than the massive municipal street-tree planting of the 1970's.

Post-Depression and Modern Years

So much has happened in the decades since the Depression years that I will only list a selection of the changes that have occurred.

New parks have been developed at a rapid rate, generally with a style strikingly different from that of the Olmsted parks. There are five basic reasons for the differences: 1.) the type of land that is being converted into parks; 2.) differences in modern park usage; 3.) the prohibitive cost of park design, implementation, administration, supplies and labor; 4.) the need to protect against vandalism; and 5.) the effects of air pollution on plants. Everything is different.

The variety of plants being used has decreased, and those most used are the standards—London planes, sweetgums, red maples, ivy and St. John's-wort. An exception is Freeway Park, which has diversity and some eye-catching varieties.

Park maintenance has also changed. The relatively high cost of personnel has resulted in fewer employees and increased mechanization. Also the tasks of lawn-mowing, weeding and leaf-raking have been superseded by both the job of repairing the steadily crumbling Depression structures, and by the fact that aging, big trees require more care than young trees. As a partial relief to park maintenance, the Adopt-a-Park program has been established.

Passive recreation and casual athletics are no longer the only park activities. Now the Department of Parks and Recreation has expanded to cover all kinds of additional activities—in short, the recreation part has grown to an equal importance with the traditional park usages.

Considering all that has been surveyed, it is clear that the average park (including the Arboretum), might be expected to contain various elements of the different historical stages—each park being predominantly influenced by one stage or another. The pre-Olmsted years (stage one) is well represented by some excellent old trees at Kinnear and Leschi parks. The Olmsted influence (stage two) may be seen in relatively pure, albeit overgrown luxuriance, in Lakeview Park and in the sinuous boulevard below it. Extensive examples and rich remnants of the Depression (stage three) are easily seen throughout the city, but perhaps the Woodland Park/Aurora Avenue stretch of landscaping exists in the purest state. Modern times (stage four) has no single recognizable style, only diversity.

Seattle's parks are best viewed as continually evolving, much as do individual people or even cities as a whole—with certain changes for the better, others for the worse. Natural growth of the vigorous plants such as ivy, coincide with the gradual demise of the weaker ones such as our native orchids. Meanwhile, all our man-made structures remain static at best.

Thus, keeping in mind the idea of ever-changing parks, we cannot after all these active years call a given park today "an Olmsted park." We can only say "this was an Olmsted park," and mention the year its design was carried out.

No matter how we choose to categorize the parks, most of us certainly are pleased with the system, or at least with an individual favorite park, realizing what a treasure we possess in these free, public and natural places in the city.

Arboretum Foundation
Annual Report 1983 - 1984

The Visitor Center

The plans for the Visitor Center continued during this year. In December, however, all design development came to a halt—both city and university architects and advisors expressed dissatisfaction with the design. An "ad hoc executive committee" was formed with authority to satisfy objections. The committee consisted of Donald Close, Arboretum Foundation; Donald Harris, Seattle Parks Department; and Harold Tukey, University of Washington. The same architectural firm was retained, with management shifting to Richard Youell, who presented a redesign that was satisfactory to all parties concerned.

The structure will be less imposing in size, yet retain the elements desired by the Arboretum Foundation. A key part of the redesigned Visitor Center will be an arbor on three sides, which will help meld the building into the surrounding plantings.

The estimated cost of the Visitor Center building is $400,000 plus $80,000 for the arbor. Additional expenses will bring the total cost to about $600,000. Plans were made for fund-raising. An Arboretum poster was produced and proceeds from its sale are going to the Visitor Center. Anyone wishing to purchase this attractive poster should contact the Foundation office. The Unit Council will very generously fund the building's interior.

Other Matters to Report

The tax classification of the Arboretum Foundation changed to that of "private foundation" as a result of the inordinately high interest earnings of 1983-1984. Steps are being taken to reverse this action.

A "tot lot" was approved by the city for a 6,000 square foot area, but Dr. Tukey was instrumental in keeping it off Arboretum land.

A new "Friends of the Japanese Garden" (later renamed the Japanese Garden Society) was formed through assistance of Unit 86, the Prentice Bloedel unit.

Joe Witt's death was marked by a memorial service attended by many. A fund was established to construct a proper permanent memorial.

The annual meeting in June featured an interesting talk by Dr. Roy L. Taylor, Director of the University of British Columbia Botanical Garden. The election of officers followed the meeting. They are: President, Leroy P. Collins, Jr.; First Vice President, Mrs. Fred G. Clarke, Jr.; Second Vice President, Mrs. Douglas Kiefer; Third Vice President, Paul Thienes; Fourth Vice President, Richard Doss; Secretary, Mrs. J. Newton Morris; Treasurer, Mrs. C. Edward Simons, Jr.

LEROY P. COLLINS, JR.
PRESIDENT

Contributions to the *Arboretum Bulletin* and Other Journals by J.A. Witt; 1955-1983

COMPILED BY BRIAN O. MULLIGAN

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Sun Damage in the Arboretum, June 1955.	XVIII	3	Fall, 1955
Books on Trees in the Arboretum Library (with Mrs. Page Ballard).	XVIII	3	Fall, 1955
New or Unusual Plants in the Arboretum (Colletia armata).	XVIII	4	Winter, 1955
Arboretum Spotlight, (*Rhodn. sutchuenense* var.).	XIX	1	Spring, 1956
Winter Damage to Plants in the Arboretum (with B.O. Mulligan).	XIX	1	Spring, 1956
Winter Hardiness of the Flowering Cherries (with B.O. Mulligan).	XIX	2	Summer, 1956
Arboretum Spotlight (Sorbus discolor).	XIX	3	Fall, 1956
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New or Unusual Plants (Stauntonia hexaphylla).	XXII	2	Summer, 1959
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Fall Color in the Arboretum.	XXIV	3	Fall, 1961
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New or Unusual Plants (Pterostyrax hispida).	XXV	2	Summer, 1962
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Plant Collections in the University of Washington Arboretum (with B.O. Mulligan).	XXVI	4	Winter, 1963
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Growth of Trees at the Arboretum.	XXXI	1	Spring, 1968
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New or Unusual Plants (Lindera obtusiloba).	XXXII	4	Winter, 1969
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The Plant Collections of the Arboretum.	XXXIII	2	Summer, 1970
The Arboretum Answers.	XXXIII	2	Summer, 1970
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Rhododendron Hybridizing in the Arboretum. (Hybrids by J.A.W.; 'Yellow Wolf' & 'Chief Joseph').	XXXIV	1	Spring, 1971
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New or Unusual Plants (Magnolia sinensis).	XXXV	1	Spring, 1972
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Arboretum Spotlight (Pinus monticola x *P. wallichiana).*	XXXVII	4	Fall, 1974
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The Frost Hardiness Research Program (with Drs. W.H. Hatheway & H. Kohn).	XL	1	Spring, 1977
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Mahonia 'A. Menzies' Supercools - Probably (with Drs. W.H. Hatheway and H. Kohn).	XLII	4	Winter, 1979
Winter Damage, 1978-1979.	XLII	4	Winter, 1979

A Flowering Cherry Identified (with B.O. Mulligan).	XLIII	2	Summer, 1980
Facets of Plant Introduction (with P. Gutter and I. Grabo).	XLIII	3	Fall, 1980
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Ornamental Shrubs for Canada, by L.C. Sherk.	XXXII	Spring, 1969
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C.S. Sargent and the Arnold Arboretum, by S.B. Sutton.	XXXIV	Summer, 1971
Trees and Shrubs Hardy in the British Isles; 8th ed., W.J. Bean. vol. IV.	XLIV	Fall, 1981

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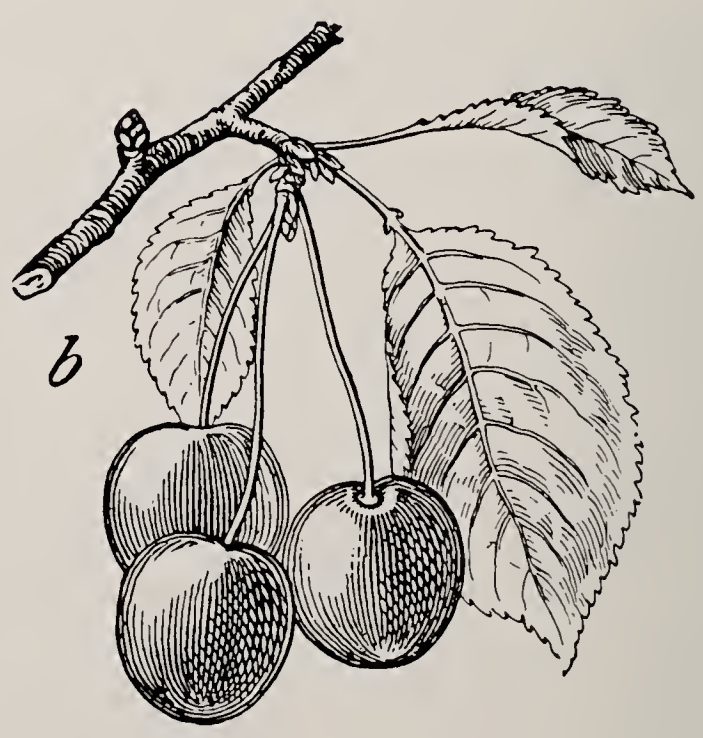

Prunus avium, *geum cherry.*

Book Reviews

THE SEX LIFE OF FLOWERS, by Bastiaan Meeuse and Sean Morris. Facts on File Publications, 460 Park Avenue South, New York 10016. 152 pages, illustrated. Hardcover $19.95.

Written with enthusiasm, and thoroughly illustrated by appropriate photographs and drawings, this informative book is a pleasure to read. It is concerned to a large extent, but not entirely, with flowers whose pollination requires the participation of insects, birds, and mammals. The authors tell us, for instance, about orchids whose resemblance to certain female bees or wasps is so striking that males attempt to mate with them, thereby transferring pollen from one flower to another. Equally engaging are the aroids whose inflorescences produce odors that may be unpleasant to us, but that attract carrion beetles, flies, and other insects that normally lay their eggs on decaying flesh or dung. For an insect, the descent into the depths of an aroid spathe is an exercise in futility, but for the plant it means successful pollination. Admirers of colors and fragrances of flowers will appreciate the many interesting examples of how animals respond to these stimuli.

The first chapter deals with the evolution of sex in plants. This is tied in with the evolution of terrestrial plants, up to the gymnosperms. Then, in the beginning of the second chapter, the flower is discussed briefly. It is at this point that the homologies between the sexual phases in the life cycles of mosses, ferns, and higher plants should have been brought out with conviction, so as to offset the misuse of the terms "male" and "female" in connection with flower parts. To those of us who teach biology and who believe in stressing the importance of homologies when these are recognized, the attribution of sexuality to flowers is disappointing. Obviously, the title of the book, as well as the title of the marvelous film on which it is based (*Sexual Adventures of the Floral Kind*), are in bad taste. I don't know whom to blame, but I'm sure our revered friend Bastiaan Meeuse is absolutely innocent. *(Editor's note: He is indeed innocent.)*

Although many of the examples dealt with in this book are exotic and not likely to be seen even in botanical gardens, the authors mention numerous plants that grow here in the Northwest. Some, like wild ginger, red columbine, orange honeysuckle and *Orthocarpus pusillus*, are native to our region. Others, including mullein, foxglove, and butter-and-eggs, are roadside attractions introduced from other parts of the world. At the back of the book is a helpful glossary that accurately defines words in common use, plus a few that you almost certainly have never heard of. Study the glossary diligently so you can drop "chasmogamy" or "chiropterophily" in the course of a casual conversation.

Yes, I really enjoyed this book and I urge you to consider adding it to your library.

EUGENE N. KOZLOFF

THE COMPLETE BOOK OF EDIBLE LANDSCAPING, by Rosalind Creasy. Illustrated by Marcia Kier-Hawthorne, Sierra Club Books, 1982. 379 pages, paperback. Price $14.95.

Webster's defines a garden as "a piece of ground for the growing of fruits, flowers or vegetables; usually close to a house." In general, "garden" is prefaced by a modifier, i.e., we've thought of a garden in terms of vegetables, herbs, flowers, etc. Use of such adjectives to define our view of a garden has been in part utilitarian. But, in addition, we use such descriptors because of our perspective regarding the home landscape and its components. Traditionally, such utilitarian plants as vegetables, fruits, herbs and even cut flowers were relegated to less visible areas.

In recent years, this idea has been vigorously challenged. Two lines of thinking have converged. One is based upon the expansion of the range of plant materials used in the landscape.

Plants with a "utilitarian" history (fruit trees, for example) have been sought—their fruit is regarded as an added ornamental bonus. The second line of thought is based upon the use of the home landscape as a food producing site. Environmental, economic and personal considerations combine to induce or intensify home food production.

These two lines of thought have been merged into a concept that residential landscapes can be highly productive sources of food as well as visually attractive, functional landscapes. It is this concept that is the general focus of Rosalind Creasy's *The Complete Book of Edible Landscaping*. Her introduction is titled, "Welcome to the Edible Landscape," and such a phrase sets the tone for her ideas and

the information that follows. The overall goals of the book are to introduce and familiarize the reader with the principles and practices of landscaping with edible plants. Ms. Creasy is a practicing landscape designer and consultant in central California.

The book is somewhat awkwardly organized into three major sections, with the first titled "Foodscaping and How to Do It." This section covers two major, and quite distinct, topics. The first deals with the environmental and economic reasons behind "foodscaping." Homegrown foods represent a conservation effort—saving energy, water, soil, and finances while avoiding contamination of the water, soil and plant. Ms. Creasy's views are quite clear—she is a committed environmentalist. Her arguments are well-considered and logical, not alarmist. And she is a gardener, for her writing also evokes a very romantic, sensitive side.

The second topic of the "Foodscaping" section covers the history, principles, and practice of home landscaping. The analysis of problems and solutions for residential landscapes is well-reviewed. Ms. Creasy is critical of those landscape professionals who are insensitive to her perspective. In the Seattle area we are fortunate to have professionals who emphasize and practice the philosophy the author espouses.

Coverage in the first section also includes a short review of edible plants for use as hedges, borders, foundations, etc. This is followed by an example of the development of a landscape plan for a residence in the Pacific Northwest. The site analysis and concept topics were well-covered, but I found the selection of plant material weak. For example, an apple variety recommended by Ms. Creasy is not on the list of cultivars recommended for our region. Following the landscape plan is a review of such practices as fertilizing, pruning, etc., which are not covered in detail. The discussion of pest management is quite good.

The second major section of the book, "An Encyclopedia of Edibles," describes 126 edible plants: from trees to annuals, apples to asparagus. Each plant is covered for level of effort required, use, cultural needs, sources, and preparing/preserving. Not all of the plants can be used in the Puget Sound region but, in general, the discussion is adequate. Many would find the comments on where to find species and cultivars useful.

The third major section covers "Resources and References." Included here are: a checklist of useful edible plants (126 described in the previous section, and 109 more), a plant source list, sources of information, a short glossary and an annotated bibliography.

The Complete Book of Edible Landscaping is a thoughtful examination of how to utilize a wide variety of plant types in the landscape. It will be useful to both novice and experienced gardeners who are interested in new types of plants or in more creative uses of edible plant material. I suggest that all gardeners would find the section on home landscaping and pest control informative.

The book does have some limitations. Most of the illustrations are line drawings. More specific examples of the design process, with perspective drawings, would have been beneficial.

In summary, the coverage of a difficult, relatively new topic was well-developed. Ms. Creasy's book is a welcome treatment of the use of food crops in the residential landscape.

DR. JAMES R. CLARK

THE NOMENCLATURE OF CULTIVATED JAPANESE FLOWERING CHERRIES (PRUNUS): THE SATO-ZAKURA GROUP. R.M. Jefferson and K.K. Wain, U.S.D.A. Agricultural Research Service. National Arboretum Contribution Number 5. 1984. 46 pages; cover illustration. No price stated.

To quote a sentence on the first page of this useful paperback publication: "For the first time, it brings existing names used for Japanese flowering cherries into conformity with the *International Code of Nomenclature for Cultivated Plants—1980,* and separates selections of cultivated origin from all other botanical taxa of *Prunus.*"

There were two authors involved in the writing of this publication. The first, R.M. Jefferson, is a botanist at the National Arboretum in Washington, D.C. and the second, K.K. Wain, is a faculty research assistant at the University of Maryland. They discuss the great problems in sorting out the nomenclature in three languages (Japanese, Latin and English) and the various attempts to do so during this century by a number of students of the Sato-zakura group. A clear separation is made between wild species and their forms or varieties ("Yama-zakura") and those cultivated cherries which have arisen over several centuries in Japan ("Sato-zakura", or village cherries). "Between

1600 and 1867 Japanese gardeners made selections from many different cultivated and wild variants with varying degrees of ornamental merit." In 1681 and 1716 one Japanese author listed 40 cultivated forms then being grown. Thirteen of these are still in cultivation today, including Fugenzo, Hizakura, Horinji, and Sekiyama (Kwanzan). The term Sato-zakura is adopted here as a group name for all Japanese cherries of uncertain orgin. It has already been used in several English publications by such authors as Collingwood Ingram, Hillier, W. J. Bean and D. L. Clarke.

The second objective of this publication is "to establish chronological priority for reusing romanized fancy names for Japanese flowering cherries that were discarded by Miyoshi and other authors during the early 20th century..." For example there is *Prunus* (Sato-zakura group) cv. Amanogawa, or cv. Fugenzo. The authors do not use single quotations for such cultivar names, as has previously been the custom.

The problems found in romanizing Japanese names are discussed on pages 6 and 7. Here the three systems in current use are compared. A modified Hepburn (Hebon-shiki) system is preferred and used here. It is most unfortunate that owing apparently to an error in the binding process, pages 2 to 11 are missing in some copies of the publication. They contain almost all the important introductory matter.

Pages 9 to 29 list the cultivars alphabetically, printing accepted names in boldface roman capitals, Japanese or English synonyms in roman capitals and Latin *forma* names in small italics. These different types make the accepted names very clear. An asterisk is added after the name if the plant is known to be in cultivation; 51 out of the 67 listed are thus marked.

For each cultivar a chronological list of the names and dates of the authors using it is supplied, as well as any synonyms it may possess. These authors' names are to be found in the 11 pages of annotated references at the end of this publication, whch must represent the most complete such bibliography on this subject yet published. The authors acknowledge the assistance they received in this connection from the Japanese Section of the Asian Division and the Arnold Arboretum.

As well as indicating that **SEKIYAMA** is a much older name (1681) than KWANZAN (1934) or KANZAN (1970) for that too popular clone, this list includes the following as synoyms for other older names: MOUNT FUJI and KOJIMA for **SHIROTAE;** MIKURUMA-GAESHI for **KIRIGAYATSU;** and SHIMIDSU or SHIMIDSUII for **OKUMIYAKO.** We shall have to learn to change names and labels to conform with these authorities.

Following these lists are 2½ pages, in close columns, of cultivar names not affected by the revision, since they have not been given *forma* names in Latin. Amongst these are DAIKOKU, PINK PERFECTION, TAIHAKU, TAOYAME, and WASE-MIYAKO. In sum, this is a most useful publication for horticultural libraries, providing authoritative proper names for these beautiful flowering trees.

BRIAN O. MULLIGAN

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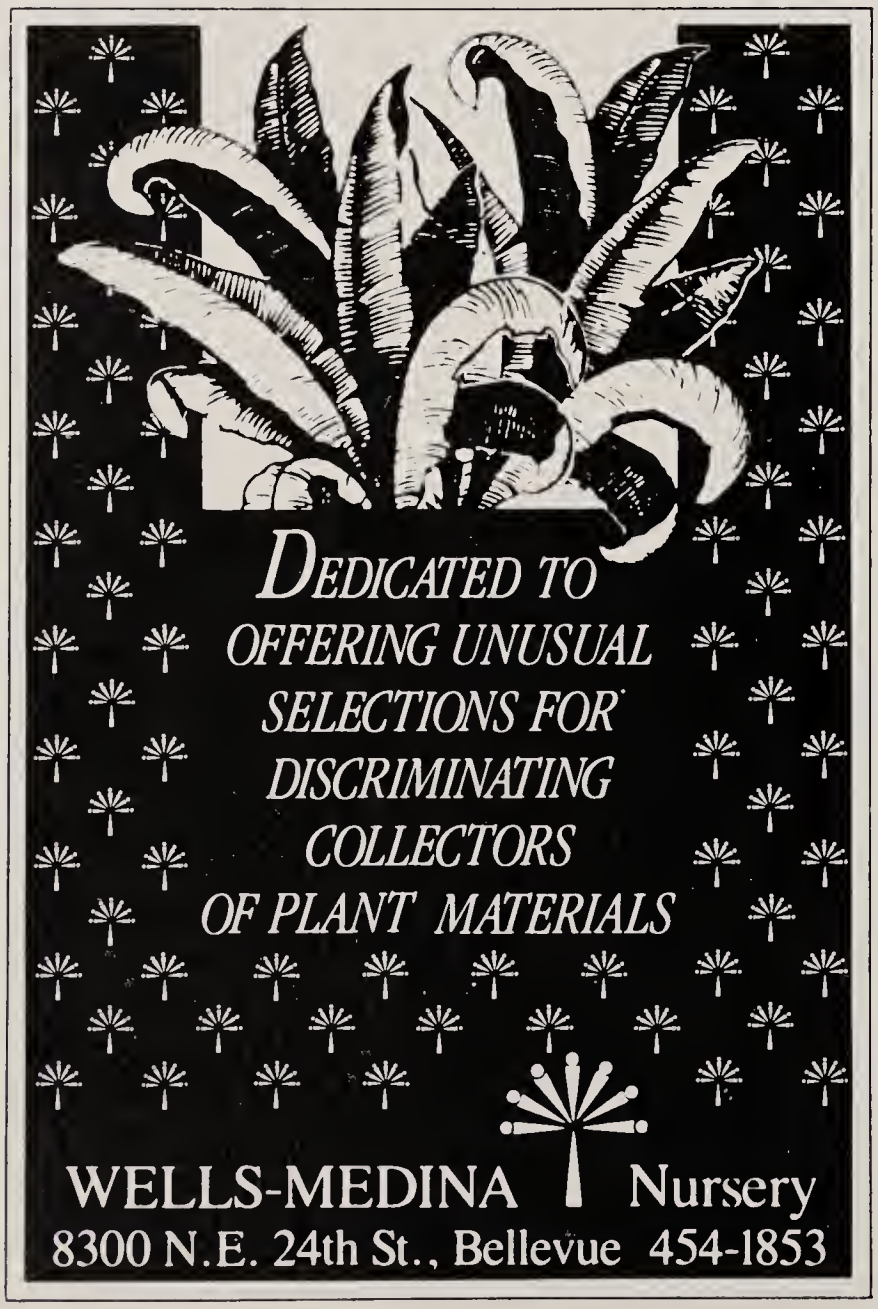

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